

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

Claims 1-2 (cancelled)

Claim 3 (currently amended): The method according to claim 23, wherein the predetermined processing includes deletion of a ~~small~~ speech segment, and in the prosody control step, deletion of the ~~small~~ speech segment to which the limitation information is added is inhibited when reduction of an utterance time of synthesized speech is performed as the prosody control.

Claim 4 (currently amended): The method according to claim 23, wherein the predetermined processing includes repetition of a ~~small~~ speech segment, and in the prosody control step, repetition of a ~~small~~ speech segment to which the limitation information is added is inhibited when prolongation of a time of synthesized speech is performed as the prosody control.

Claim 5 (currently amended): The method according to claim 23, wherein the predetermined processing includes a change in an interval of a ~~small~~ speech segment, and

in the prosody control step, a change in an interval of a ~~small~~ speech segment to which the limitation information is added is inhibited when making a change in a fundamental frequency of synthesized speech as the prosody control.

Claim 6 (currently amended): The method according to claim 23, wherein
a storage unit in which a plurality of window functions arranged along a time axis and limitation information corresponding to at least one of the window functions are stored is used,

in the extraction step, ~~small~~ speech segments are extracted from a speech waveform by using the plurality of window functions, and

in the prosody control step, when limitation information is made to correspond to a window function, a ~~small~~ speech segment extracted by using the window function is selected and the limitation is imposed on the ~~small~~ speech segment on the basis of the limitation information.

Claim 7 (currently amended): The method according to claim 23, wherein in the adding step, the limitation information is added to a ~~small~~ speech segment corresponding to a specific position on a speech waveform.

Claim 8 (original): The method according to claim 7, wherein the specific position includes a boundary between a voiced sound portion and an unvoiced sound portion.

Claim 9 (original): The method according to claim 7, wherein the specific position includes a phoneme boundary.

Claim 10 (currently amended): The method according to claim 7, wherein the specific position is a predetermined range including a plosive, and the predetermined range includes a plurality of ~~small~~ speech segments.

Claims 11-12 (cancelled)

Claim 13 (currently amended): The apparatus according to claim 25, wherein the predetermined processing includes deletion of a ~~small~~ speech segment, and said prosody control unit inhibits deletion of the ~~small~~ speech segment to which the limitation information is added when reduction of an utterance time of synthesized speech is performed as the prosody control.

Claim 14 (currently amended): The apparatus according to claim 25, wherein the predetermined processing includes repetition of a ~~small~~ speech segment, and said prosody control unit inhibits repetition of a ~~small~~ speech segment to which the limitation information is added when prolongation of a time of synthesized speech is performed as the prosody control.

Claim 15 (currently amended): The apparatus according to claim 25, wherein

the predetermined processing includes a change in an interval of a ~~small~~ speech segment, and

said prosody control unit inhibits a change in an interval of a ~~small~~ speech segment to which the limitation information is added when making a change in a fundamental frequency of synthesized speech as the prosody control.

Claim 16 (currently amended): The apparatus according to claim 25, further comprising a storage unit in which a plurality of window functions arranged along a time axis and limitation information corresponding to at least one of the window functions are stored,

wherein said extraction unit extracts ~~small~~ speech segments from a speech waveform by using the plurality of window functions, and

said prosody control unit, when limitation information is made to correspond to a window function, selects a ~~small~~ speech segment extracted by using the window function and imposes the limitation on the basis of the limitation information.

Claim 17 (currently amended): The apparatus according to claim 25, wherein said adding unit adds the limitation information to a ~~small~~ speech segment corresponding to a specific position on a speech waveform.

Claim 18 (original): The apparatus according to claim 17, wherein the specific position includes a boundary between a voiced sound portion and an unvoiced sound portion.

Claim 19 (original): The apparatus according to claim 17, wherein the specific position includes a phoneme boundary.

Claim 20 (currently amended): The apparatus according to claim 17, wherein the specific position is a predetermined range including a plosive, and the predetermined range includes a plurality of ~~small~~ speech segments.

Claim 21 (currently amended): A control program for making a computer implement a speech synthesizing method comprising:

an extraction step of extracting a plurality of ~~small~~ speech segments from a speech waveform;

an adding step of adding limitation information for inhibiting execution of predetermined processing to a selected ~~small~~ speech segment of the plurality of ~~small~~ speech segments;

a prosody control step of processing the plurality of ~~small~~ speech segments to control prosody of the speech waveform, wherein the prosody control step inhibits while ~~inhibiting~~ execution of the predetermined processing for a ~~small~~ speech segment to which the limitation information is added; and

a synthesizing step of obtaining synthesized speech by using the speech waveform for which prosody control is performed in the prosody control step.

Claim 22 (currently amended): A storage medium storing a control program for making a computer implement a speech synthesizing method comprising;

an extraction step of extracting a plurality of ~~small~~ speech segments from a speech waveform;

an adding step of adding limitation information for inhibiting execution of predetermined processing to a selected ~~small~~ speech segment of the plurality of ~~small~~ speech segments;

a prosody control step of processing the plurality of ~~small~~ speech segments to control prosody of the speech waveform, wherein the prosody control step inhibits while ~~inhibiting~~ execution of the predetermined processing for a ~~small~~ speech segment to which the limitation information is added; and

a synthesizing step of obtaining synthesized speech by using the speech waveform for which prosody control is performed in the prosody control step.

Claim 23 (currently amended): A speech synthesizing method comprising:

an extraction step of extracting a plurality of ~~small~~ speech segments from a speech waveform;

an adding step of adding limitation information for inhibiting execution of predetermined processing to a selected ~~small~~ speech segment of the plurality of ~~small~~ speech segments;

a prosody control step of processing the plurality of ~~small~~ speech segments to control prosody of the speech waveform, wherein the prosody control step inhibits while ~~inhibiting~~ execution of the predetermined processing for a ~~small~~ speech segment to which the limitation information is added; and

a synthesizing step of obtaining synthesized speech by using the speech waveform for which prosody control is performed in the prosody control step.

Claim 24 (cancelled)

Claim 25 (currently amended): A speech synthesizing apparatus comprising:

an extraction unit configured to extract a plurality of ~~small~~ speech segments from a speech waveform;

an adding unit configured to add limitation information for inhibiting execution of predetermined processing to a selected ~~small~~ speech segment of the plurality of ~~small~~ speech segments;

a prosody control unit configured to process the plurality of ~~small~~ speech segments to control prosody of the speech waveform, wherein the prosody control step inhibits ~~while inhibiting~~ execution of the predetermined processing for a ~~small~~ speech segment to which the limitation information is added; and

a synthesizing unit configured to obtain synthesized speech by using the speech waveform for which prosody control is performed by said prosody control unit.

Claim 26 (cancelled)

Claim 27 (currently amended): A speech synthesizing method comprising:

an extraction step of extracting a plurality of ~~small~~ speech segments from a speech waveform;

a prosody control step of processing the plurality of ~~small~~ speech segments to control prosody of the speech waveform, wherein the prosody control step inhibits ~~while inhibiting~~ execution of the predetermined processing for a ~~small~~ speech segment based on the limitation information corresponding to the speech waveform; and

a synthesizing step of obtaining synthesized speech by using the speech waveform for which prosody control is performed in the prosody control step.

Claim 28 (currently amended): A speech synthesizing apparatus comprising:

an extraction unit configured to extract a plurality of ~~small~~ speech segments from a speech waveform;

a prosody control unit configured to process the plurality of ~~small~~ speech segments to control prosody of the speech waveform, wherein the prosody control step inhibits ~~while inhibiting~~ execution of the predetermined processing for a ~~small~~ speech segment based on the limitation information corresponding to the speech waveform; and

a synthesizing unit configured to obtain synthesized speech by using the speech waveform for which prosody control is performed by said prosody control unit.

Claims 29-34 (cancelled)

Claim 35 (currently amended) A control program for making a computer implement a speech synthesizing method comprising:

an extraction step of extracting a plurality of ~~small~~ speech segments from a speech waveform;

a prosody control step of processing the plurality of ~~small~~ speech segments to control prosody of the speech waveform, wherein the prosody control step inhibits while ~~inhibiting~~ execution of the predetermined processing for a ~~small~~ speech segment based on the limitation information corresponding to the speech waveform; and

a synthesizing step of obtaining synthesized speech by using the speech waveform for which prosody control is performed in the prosody control step.

Claim 36 (currently amended) A storage medium storing a control program for making a computer implement a speech synthesizing method comprising:

an extraction step of extracting a plurality of ~~small~~ speech segments from a speech waveform;

a prosody control step of processing the plurality of ~~small~~ speech segments to control prosody of the speech waveform, wherein the prosody control step inhibits while ~~inhibiting~~ execution of the predetermined processing for a ~~small~~ speech segment based on the limitation information corresponding to the speech waveform; and

a synthesizing step of obtaining synthesized speech by using the speech waveform for which prosody control is performed in the prosody control step.

Claim 37. (new) The method according to claim 23, wherein the speech waveform comprises the plurality of speech segments; and

wherein the prosody control step do not execute the predetermined processing to the speech segments in case that the limitation information is effective.

Claim 38. (new) The apparatus according to claim 25, wherein the speech waveform comprises the plurality of speech segments; and
wherein the prosody control unit do not execute the predetermined processing to the speech segments in case that the limitation information is effective.

Claim 39. (new) The method according to claim 27, wherein the speech waveform comprises the plurality of speech segments; and
wherein the prosody control step do not execute the predetermined processing to the speech segments in case that the limitation information is effective.

Claim 40. (new) The method according to claim 39, wherein the limitation information is effective for a speech segment corresponding to a specific position on a speech waveform.

Claim 41. (new) The method according to claim 40, wherein specific position includes a boundary between a voiced sound portion and an unvoiced sound portion.

Claim 42. (new) The method according to claim 40, wherein specific position includes a phoneme boundary.

Claim 43. (new) The method according to claim 40, wherein the specific position includes a plosive.

Claim 44. (new) The method according to claim 27, wherein the predetermined processing includes deletion of a speech segment, and in the prosody control step, deletion of the speech segment is inhibited in case that prolongation of a time of synthesized speech is performed as the prosody control.

Claim 45. (new) The method according to claim 27, wherein the predetermined processing includes repetition of a speech segment, and in the prosody control step, repetition of a speech segment is inhibited in case that prolongation of a time of synthesized speech is performed as the prosody.

Claim 46. (new) The method according to claim 27, wherein the predetermined processing includes a change in an interval of a speech segment, and in the prosody control step, a change in an interval of a speech segment is inhibited in case that making a change in a fundamental frequency of synthesized speech as the prosody control.

Claim 47. (new) The apparatus according to claim 28, wherein the speech waveform comprises the plurality of speech segments; and
wherein the prosody control unit do not execute the predetermined processing to the speech segments in case that the limitation information is effective.